

marcowe

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **24**
- SRM **9.5**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **80 liter(s)**
- Trub loss **5 %**
- Size with trub loss **84 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **105.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **70 liter(s)**
- Total mash volume **87.5 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **70 liter(s)** of strike water to **56C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **64C**
- Keep mash **50 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **53.3 liter(s)** of **76C** water or to achieve **105.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Strzegom Wiedeński | 8 kg (45.7%) | 79 % | 10 |
| Grain | Strzegom Monachijski typ II | 8 kg (45.7%) | 79 % | 22 |
| Grain | Strzegom Karmel 150 | 1 kg (5.7%) | 75 % | 150 |
| Grain | Strzegom Pszeniczny | 0.5 kg (2.9%) | 81 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | mgnum | 50 g | 60 min | 12 % |
| Boil | Sybilla | 100 g | 10 min | 6.9 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------|-------|-------|--------|------------|
| w 34\70 | Lager | Slant | 600 ml | --- |